SAMPLE PLAN ALTERATION FORM

Project Name and Number: Gunshy Manor, TO-027-009

Materials to be Sampled:

Subsurface soil and groundwater from Thompson Field at the Gunshy Manor site, and groundwater from downgradient off-site monitoring wells located on private property and property owned by the City of Redmond.

Measurement Parameters:

Field sampling for offsite fixed laboratory analysis for the following analytical suites:
Target Analyte List (TAL) metals (including mercury), semivolatile organic compounds (SVOCs) (including polycyclic aromatic hydrocarbons [PAHs]), polychlorinated biphenyls (PCBs), diesel range organics, residual range organics, gasoline range organics, and volatile organic compounds (VOCs).

Standard Procedure for Field Collection and Laboratory Analysis (cite references):

- Borehole Installation and Subsurface Soil Sampling Methods (E & E SOP – Geo 4.7);
- Groundwater Well Sampling (E & E SOP – Env 3.07);
- Surface and Shallow Subsurface Soil Sampling (E & E SOP – ENV 3.13);
- Evaluation of Existing Monitoring Wells (E & E SOP – GEO 4.19);
- Collecting Soil and Sediment Samples for VOC Analysis (E & E SOP – ENV 3.25);

- Diesel Range Petroleum Hydrocarbons in soil and water (NWTPH-Dx)
- Gasoline Range Hydrocarbons in soil and water (NWTPH-Gx)
- PCBs in soil and water (EPA CLP SOW SOM02.4)
- SVOCs/PAHs in soil and water (EPA CLP SOW SOM02.4)
- TAL Metals including Mercury in soil and water (EPA CLP SOW ISM02.4)
- VOCs in soil and water (EPA CLP SOW SOM02.4)

Reason for Change in Field Procedure or Analytical Variation:

Groundwater Sampling:

The sampling and quality assurance plan (SQAP) specified that one groundwater monitoring well would be sampled at a private residence and two groundwater monitoring wells would be sampled at Arthur Johnson Park, owned by the City of Redmond. Additionally, groundwater would be collected from six temporary borings located in Thompson Field at the Gunshy Manor site. For both monitoring wells and temporary borings, groundwater would be purged prior to sample collection to allow for water quality parameters to stabilize. A filtered groundwater aliquot would be collected for TAL metals analysis only if turbidity did not reduce below 50 nephelometric turbidity units (NTUs).

Subsurface Soil Sampling:

Temporary borings were to be advanced up to 15 feet below ground surface (bgs) utilizing a truck-mounted direct push drilling technique. Up to three subsurface soil samples would be collected from each boring.

Variation from Field or Analytical Procedure:

Groundwater Sampling:

While sampling the groundwater monitoring well located at the private residence, the property owner indicated that there was a second well on the property. This well was a drinking water well that had not been in service since the property had been connected to the Union Hill Water Association. The property owner did not know the length of time the well had been out of service. After confirming with the EPA TM, the well was sampled. For the temporary borings located in Thompson Field, filtered groundwater aliquots were collected for TAL metals analysis even though turbidity reduced to below 50 NTUs.

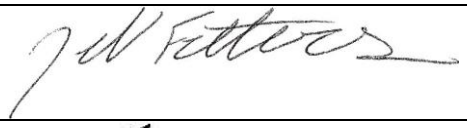
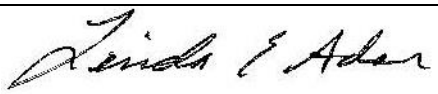
Subsurface Soil Sampling:

Due to the wet and soft field conditions that prevented accessing some proposed borehole locations with the truck-mounted

direct push drill rig, non-dedicated hand auger was utilized to collect subsurface soil samples from two boreholes in the northern and one borehole in the center portion of Thompson Field. The hand auger was decontaminated between each borehole. These boreholes could only be advanced up to three feet bgs and did not encounter groundwater. No groundwater samples were collected from the two northern and one center borehole. A single rinsate sample was collected from the hand auger.

Special Equipment, Materials, or Personnel Required:

Hand auger.

CONTACT	APPROVED SIGNATURE	DATE
Initiator: Jeff Fetters		11/20/2019
START SA TL: Linda Ader		11/20/2019
EPA TM: Brandon Perkins		
EPA QA Manager: Donald M. Brown		